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Moving to Opportunity: A Housing Experiment that Worked

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That childhood poverty has a negative effect on educational outcomes is well established. Children from low-income families are only one-third as likely to complete high school as their more fortunate peers (Magnuson & Votruba-Drzal, 2009), and they are less likely to go to college even when they do complete high school. In 2012, 81% of students from the top-income quintile who had recently completed high school were enrolled in college, compared with only 51% from the bottom quintile (DeSilver, 2014). On the National Assessment of Education Progress (NAEP), the gap between children who come from low-socioeconomic status (SES) families and high-SES families is twice the size of the gap between black and white students (Reardon, 2011). Moreover, the income achievement gap continues to grow: it is 40% greater than several decades ago (Reardon, 2013).

Mediating the negative effects of poverty thus remains a core concern of education policy, but what exactly should be done? Should we focus on changing the school culture itself or on anti-poverty measures *per se*? Some scholars point to the capacity of a few remarkable schools to change student outcomes, regardless of family background (Bryk et al. 1993; Tuttle et al., 2015), while others argue that good schools are necessary but simply insufficient and that the underlying causes must be addressed (Rothstein, 2004; Morsy and Rothstein, 2015).

Policy-makers will find a recent Harvard study to be of interest. In their paper, “The Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Experiment” (forthcoming), economists Raj Chetty, Nathaniel Hendren, and Lawrence Katz examined one housing reform that produced long-term positive effects: moving families with young children to lower-poverty neighborhoods. Chetty et al. found that when low-income families were randomly selected to move to better neighborhoods, their young children were 16% more likely to attend college, attended higher-quality colleges on average, and increased their average annual earnings by \$1,624 in their mid-twenties.

This housing experiment and its findings are significant. There have been very few randomized controlled trials – the gold standard of social scientific research – in housing policy, which makes Moving to Opportunity (MTO) an unusual project from the beginning. Furthermore, earlier explorations of the same data looked at short-term schooling outcomes, such as reading and math test scores, and found no significant effect (Sonbonmatsu et al. 2006). Finally, other randomized studies found negligible effects on children; for example, in “Human Capital Effects of Anti-Poverty Programs: Evidence from a Randomized Housing Voucher Lottery” (2014), Brian Jacob, Max Kapustin, and Jens Ludwig found that randomized housing vouchers in Chicago had small and mainly insignificant effects on children’s outcomes over a 14-year period.

Thus, Chetty et al.’s finding of large and important impact upon children as a result of an experimental housing experiment is striking. How had the experiment been designed, and how did Chetty’s team assess its effects?

The Data

Chetty et al. used data from Moving to Opportunity, a United States Department of Housing and Urban Development experiment that took place between 1994 and 1998 in five urban areas: Baltimore, Boston, Chicago, Los Angeles, and New York. In this experiment, 4,604 randomly selected families living in high-poverty government housing projects were randomly divided into one of three groups where they received: (1) an experimental housing voucher that required the family to move to a neighborhood with a poverty rate below 10%; or (2) a standard voucher for subsidized housing; or (3) no voucher (this was the control group that retained its access to public housing). The authors divide children into two groups: young children (under 13 at the time of random assignment) and older children (between ages 13-18 at the time of random assignment). Chetty et al. focused on the long-term impact of MTO for the children of the families who participated.

Chetty's team linked MTO data to federal income tax data. Through the tax data, the authors were able to investigate a wide range of outcomes, including income, teenage pregnancy, college attendance, the quality of the college attended, neighborhood characteristics of where the MTO child lives as an adult (currently ages 24 to 40), and adult income.

Methodology

The randomization in the experiment allows the researchers to state that moving to a lower-poverty neighborhood caused positive outcomes. Because the randomization is critical to the results, the authors first had to establish the statistical similarity of the families that participated, regardless of which intervention they received. The authors do this by comparing the characteristics of young and older children (e.g. race, the characteristics of their head of household, schooling characteristics [suspensions, special class or school], health outcomes, etc.) across each of the three random assignment groups. The authors determined that out of the 196 student characteristics they investigate, only 13 characteristics are statistically different. This small number of differences between the different assignment groups indicates that the randomization and thus the data are sound.

The authors next estimate the effect of being offered the vouchers. This estimate is called the intent-to-treat (ITT) and is the average differences between the treatment and control groups. However, the effect of being offered the voucher is smaller than the effect of using the voucher, because only 48% of families with young children that were offered the experimental voucher actually moved; likewise, only 66% of families with young children offered the standard voucher moved. The ITT estimates for the experimental voucher group include the better outcomes (from people who were offered and used the voucher) and outcomes similar to those of the control group (from the people who were offered the voucher but never used it).

The primary goal of Chetty's study is to estimate the effect of the experimental voucher on the families that moved. In order to do this, the authors used the random assignment as an instrumental variable to account for endogeneity (the fact that there could be unobserved differences between the families that were offered the vouchers that did and did not decide to use them). For example, families that decided to move could be more attentive parents. This characteristic would not have been seen in the data, but

would bias the estimated effect of using the voucher. The instrumental variable gets around this problem because it is correlated with long-term outcomes only through the family moving. These estimates are called the effect of the treatment on the treated (TOT) and are the estimated effect of the experiment on the families that moved, holding everything else equal.

Finally, the authors investigate whether exposure to a low-poverty neighborhood for longer periods of time is associated with better outcomes. These estimates could suffer from endogeneity, however, and therefore do not have a causal interpretation.

Results and Further Considerations

The authors find that children who were under the age of 13 when their families received the experimental voucher displayed stronger outcomes on a wide variety of adult social and economic outcomes. Men and women married at a higher rate, women were more likely to give birth with the father present, and both men and women lived in areas with a higher mean income and less racial segregation than those who remained in public housing. The positive, long-term effects of the MTO program held across gender, racial, and regional differences - for children who were young when they moved.

Chetty's team also finds that these children were more likely to attend college between the ages of 18 and 20; the ITT estimates on college attendance found that children in the experimental voucher group were 2.5% higher, or 16% more likely, to attend than the control group, whose average college attendance rate was 16.5%. Young children in the experimental group also attended higher quality colleges. The authors create an index for college quality, which is defined as the average earnings of 31-year-old U.S. residents born in 1979-1980 who were enrolled in a given college at the age of 20. Using this measure, young children who were in the experimental voucher group had an estimated \$687 increase in college quality over the control group. Attending better colleges paid off: estimated increased income was \$3,477 higher for children whose parents moved using the experimental vouchers, the TOT estimates. This is a 31% increase in wages over the control group's average income of \$11,270.

What were the effects on children who were 13 or older at the time of the move to low-poverty neighborhoods? Unfortunately, the researchers find either insignificant or negative outcomes. For example, the ITT estimates for average earnings were \$967 less than the control group for older children in the experimental voucher group, although this difference is statistically insignificant. Older children who received the experimental voucher were also roughly 4.3% less likely to attend college than older children in the control group. Older children also had a *decrease* of roughly \$883 in college quality than the control group. The authors suggest that negative outcomes for experimental group's older children might be due to disruption of social networks.

In keeping with these findings on the different effects for young and older children, Chetty's team finds that the earlier and longer a child is exposed to a better neighborhood, the better the outcomes were.

This study is striking but not without methodological drawbacks. The data used are proprietary, and thus the results cannot be independently confirmed nor additional specifications investigated. We might want to ask, for example, whether the program effects differed according to early school success. Was the program of greater benefit to students who had already achieved early academic success? Or was the advantage proportionately greater for struggling students?

The findings also suggest new lines of inquiry. What exactly was it about these particular neighborhoods that produced improvements in long-term outcomes for young children? Are better schools in the new neighborhood the chief underlying cause? Is it the combination of certain neighborhood characteristics that are critical to a student's long-term success? Disentangling the individual effects of the new neighborhoods would sharpen future policies around low-income families and housing.

Despite these limitations, Chetty's study should attract attention across the country. This issue is of critical importance; policy-makers know that the academic gaps between low- and high-income children are increasing over time (Aber et al. 2015). Chetty's research on MTO suggests that giving low-income families with young children the opportunity to move to low-poverty areas can reverse this trend.

The opinions expressed here are the author's own and do not necessarily reflect the views of Johns Hopkins University.

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